

PATENT ABSTRACTS OF JAPAN

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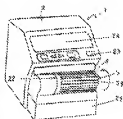
[54]ANALYZER

[57]Abstract:

PURPOSE To continuously make possible the measurement and discharge of test tools and continue reduction of a working time by rotating a tray and moving the test tools via of a mounting part at an exposed location up to a measurement part and a discharge part of a device body.

CONSTITUTION A tray 3 is rotated in an arrow direction when a switch 23 is operated. Test tools 4 are mounted on a mounting part 31 placed at an instructed position 22 one by one when stop is performed for about 6 seconds with a stop means once. The measurement is performed with a measurement part 24 turn from the forefront tool as the stop is performed for about 6 seconds once.

Furthermore, the tray 3 is rotated, so that a discharge guide provided at the circumference end of the tray of the device body 2 is reached in the end of the test tools 4, which are successively sent down in a scrap box 21. A measurement result of an object to be measured adhering to the test tools 4 is shown on a display 26. The operation is repeated for the purpose of measuring a number of the test tools 4 in a short time.



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discrepancies caused by the use of this translation.

1. This document has been translated by computer, so the translation may not reflect the
original precisely.

2. "" shows the word which can not be translated.

3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the device for conducting detection analysis of
glucose, sugar, protein, etc. in the specific component in a sample, for example, urine.

[0002]

[Description of the Prior Art] In conducting measurement analysis of the sample ingredient of
the urine, for example, urine, a test tool is made immersed into urine and coloration of the
test layer is carried out, and by the analysis apparatus, the coloration intensity is measured
and it is analyzing each sample ingredient. On the other hand, the analysis apparatus has a
device main frame having the optical measuring unit for generally measuring coloration
intensity, and a tray which lays a test tool.

Said tray lays a test tool out of a device main frame, and has the structure of conveying said
test tool to the measuring point in a device main frame.

[0003] However, since there needed a complicated device, the main part was large, and a
maintenance and cleaning were complicated (in order that the device which inspects a sample
continuously might carry the test tool etc. in which the sample or the reagent adhered to a test
section, the tray of a sliding type or the shape of a conveyor was generally used but).

[0004]

[Problems to be Solved by the Invention] The purpose of this invention is to provide the
analysis apparatus which corrects the fault of the conventional technology mentioned above
and can analyze a sample.

[0005]

[Means for Solving the Problem] The above mentioned purpose is attained by this invention
shown below.

inconveniently stored in an abandonment box. A suitable thing of "A", such as a thing of case boxes, such as a plastic and metal, paper and a film, is also possible for an abandonment box. An abandonment box is possible also for a disposable thing, and can be discarded with a used test tool stored at that time.

[0112]

[Example] Hereafter, an example is shown and the invention is explained out in detail.

[0113] Drawing 1 is a transverse-plane perspective view of the analysis apparatus 1. The test section 23 and the indicator 24 are built in in the device main frame 2 of the analysis apparatus 1. In the device main frame 2, the tray 3 and the abandonment box 21 possess, and the tray has the placing part 31 on the surface.

[0114] The test tool 4 which inserted the sample in the hollow of the placing part 31 of the tray 3 specified by the specified position 22 of the main frame 2 is made to fit in. The test tool 4 which fits into the tray 3 comprises the strip-of-paper-like base material 40 and the reagent layer 41 arranged on it by regular intervals from the end of the base material 40, as shown in drawing 2. And the reagent layer 41 is not arranged but the other end of the base material 40 is a handle part. The test tool 4 of this example is targeting urine as a sample. As construction material of the base material 40, and polyethylene, polyethyleneterephthalate, Plastic, such as polyvinyl chloride, polyvinyl acetate, polycarbonate, and polystyrene, The construction material which has a certain amount of elasticity, such as ceramic, paper and metal, is used, and the reagent which reacts to grape sugar in urine, bilirubin protein, etc., respectively, and carries out coloration as each reagent layer 41 is used respectively.

[0115] Although the light from a light source is reflected by the reagent layer 41 and the method of measuring the colored light is used by this example as a method of measuring the coloration intensity of the reagent layer 41 of the above test tool 4, it is also possible to use other methods. It consists of a light source which specifically emits light to the angle of 45 degrees to the reagent layer 41, and a light sensing portion provided right-angled to a flat plane of the reagent layer, use reflected light intensity of the reagent layer 41 which the light sensing portion received a base%, and the coloration intensity of the reagent layer 41 is judged.

[0116] The tray 3 is attached to the device main frame 2 as shown in drawing 3. In the device main frame 2, it has a means to rotate the tray 3, and has an electric motor which operates by a storage battery in the device main frame 2 on the longitudinal direction extension side of the tray 3 in the example. Said electric motor is operated by the switch 23. When the specified position 22 and the test tool 4 are included in the test section 25 in the tray 3, it means to make power transmission to a motor effect automatically, and to make for several seconds stop is formed in the device main frame 2.

[0117] The switch's 23 operation of the tray 3 will rotate it in an arrow direction, as shown in

